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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,096	10/22/2001	Patrick G. Xavier	SD6851/S96528	5879
20567	7590	11/18/2005	EXAMINER	
SANDIA CORPORATION			GUILL, RUSSELL L	
P O BOX 5800			ART UNIT	
MS-0161			PAPER NUMBER	
ALBUQUERQUE, NM 87185-0161			2123	

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/037,096

Applicant(s)

XAVIER ET AL.

Examiner

Russell L. Guill

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 14 is/are rejected.
- 7) ☒ Claim(s) 1-24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to an Amendment filed September 12, 2005. Claims 1 - 24 were pending. Claims 1 - 4, 6, 11 - 20 and 22 - 24 have been amended. No claims have been canceled. Claims 1 - 24 have been examined. Claims 2 and 14 have been rejected. Claims 1 - 24 are objected to.

Response to Remarks

2. Regarding **Claims 2 and 14** rejected under 35 U.S.C. § 112, second paragraph:
- a. On page 10 and page 11, first paragraph, the Applicant reviews the definition of world modules and proxy modules. The Examiner respectfully replies, however, that there is no teaching or suggestion of a definition of a mobility world and contact world.
 - b. On page 11, second paragraph that starts with, "Therefore it can be . . . ", the Applicant asserts that "sensor world modules, contact world modules and contact physics modules can for example, be associated with sensor based modules, and a mobility world module can for example, be associated with mobility dynamics module." The Examiner respectfully replies that the statement is not supported by a reference to the specification that would support the association of a contact world module and a contact physics module with a sensor based module, and the association of a mobility world module with a mobility dynamics module.
 - c. On page 11, third paragraph that starts with "An example of a mobility . . . ", the Applicant recites that an example of a mobility world module can be found in figure 5, as described on page 19 at line 20, "Vehicle physics module 560 can reference, for example, terrain database proxy module 510, owned by Terrain world module (not shown) to compute how the associated vehicle would move under a command signal." i.e. as associated with the vehicles mobility. The

Examiner is uncertain which module is intended to be the example of a mobility world module, but it appears that the vehicle physics module 560 is the intended candidate. The Examiner respectfully replies that the vehicle physics module 560 does not appear to fulfill the definition of a world module, since it is incorporated inside a meta-module. There is also no teaching or suggestion that it is a proxy module of a world module.

d. On page 11, third paragraph that starts with "An example of a mobility . . .", continuing on page 12, first paragraph, the Applicant recites various embodiments of vehicle mobility modules from the specification on page 26, lines 12 - 22 and page 27, lines 1 - 5. The Examiner respectfully replies that there is no indication or suggestion that the recited modules are proxy modules of a mobility world module. Further, there is no teaching of any data that would be supplied to the vehicle mobility modules by a mobility world module.

e. On page 12, second paragraph that starts with "Additionally, embodiments of world . . .", the Applicant asserts that a contact world module can take advantage of pre-existing collision detection libraries as described, for example, at page 23, lines 9 - 22, and at page 24, lines 19 - 22. The Examiner respectfully replies that the recited lines have no teaching or suggestion of a contact world module, but refer to "geometric computation worlds" using V-Collide and C-Space tools.

f. On page 12, second paragraph that starts with "Additionally, embodiments of world . . .", the Applicant recites page 29, lines 13 - 22 of the specification as describing an exemplary embodiment wherein "collision detection", i.e. contact, has been demonstrated. The Examiner respectfully notes that the recited lines provide no teaching or suggestion of an associated contact world module, nor an indication of a contact proxy module used.

g. However, a rejection under 35 U.S.C. 112 first paragraph appears to be more appropriate, and this change is reflected in the body of this Office Action below.

3. Regarding **claims 1 - 15**, rejected under 35 U.S.C. § 101, Applicants' amendments to the claims overcome the rejection, and the rejection is withdrawn.

4. **Regarding claims 1, 3 - 13 and 15 - 24**. Applicant's arguments have been fully considered, and are persuasive. The rejections are withdrawn.

Claim Objections

5. Claims 1, 4, 13, 16 and 24 are objected to because of the following informalities: The claims refer to "one or more interaction phenomenon". It appears that a plural of phenomenon is needed for grammatical reasons, and the phrase should be "one or more interaction phenomenena". Appropriate correction is required.

6. Claims 2 - 3, 5 - 12, 14 - 15 and 17 - 23 are objected to because they are dependent on a claim that was objected to, and fail to correct the objection.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

a. Claims 2 and 14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The claims recite, "a communication world, a

sensor world, a mobility world, and a contact world.” The specification does not provide direction and guidance on how to make the invention with respect to a mobility world and a contact world. The specification recites both worlds, but appears to have no teaching or suggestion that connects these worlds to any proxy objects.

Conclusion

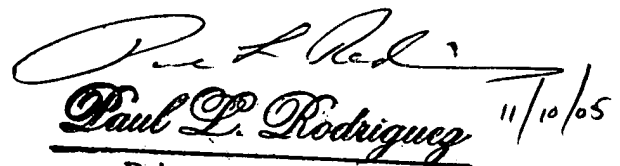
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell L. Guill whose telephone number is 571-272-7955. The examiner can normally be reached on Monday – Friday 9:00 AM – 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Any inquiry of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Russ Guill
Examiner
Art Unit 2123

RG


Paul L. Rodriguez 11/10/05
Primary Examiner
Art Unit 2125